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June 2, 1999

VIA MESSENGER

Magalie Roman Salas, Secretary
Federal Communications Commission
Portals II, 445 12th Street, S.W.
Washington, D.C. 20554

Re: CC Docket No. 94-102

Dear Ms. Salas:

Enclosed for filing is a corrected version of the June 1, 1999 *ex parte* filing of SnapTrack, Inc. ("SnapTrack"). This filing corrects an inadvertent production error in the *ex parte* exhibits.

Respectfully submitted,

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June 1, 1999

VIA MESSENGER

Magalie Roman Salas, Secretary
Federal Communications Commission
Portals II, 445 12th Street, S.W.
Washington, D.C. 20554

Re: CC Docket No. 94-102
Response to TruePosition, Inc. Late-Filed Ex Parte Comments

Dear Ms. Salas:

SnapTrack, Inc. ("SnapTrack"), by its attorneys, submits this response to the April 29, 1999 late-filed *ex parte* comments of TruePosition, Inc. ("TruePosition") in the captioned proceeding.[1] Unfortunately, TruePosition repeats the inaccurate claims from its February 16, 1999 comments in this docket, ignoring the facts which have been included in the record by wireless carriers and other parties. Although SnapTrack would prefer not to waste the Commission's limited time and resources on what, as documented below, are incorrect, unsubstantiated contentions, we are constrained to respond so that no inference of SnapTrack's concurrence arises from silence.

INTRODUCTION

While TruePosition's *ex parte* is principally directed at SnapTrack, it should go without saying that SnapTrack is not the only entity developing GPS-based solutions to E911 location and concerned about the biased nature of the Commission's current rules. Major wireless

[1] Letter from Antoinette Cook Bush et al, counsel for TruePosition, to Magalie Roman Salas, Secretary, FCC (April 19, 1999)("TruePosition Ex Parte"). TruePosition's *ex parte* comments, which are not authorized under the pleading schedule set forth in the Bureau's December 24, 1998 Public Notice (DA 98-2631)("Public Notice"), repeatedly refer to SnapTrack's February 25, 1999 comments as "late-filed." Yet TruePosition fails to note that SnapTrack filed these comments just three days late, after serving all parties, explaining that "[d]elays in obtaining copies of the waivers and comments of record . . . from the Commission's contract copier, coupled with a family illness for SnapTrack's lead counsel," necessitated the slight extension. Motion of SnapTrack for Leave to File Comments Out-of-Time (Feb. 25, 1999). In contrast, TruePosition's April 29, 1999 *ex parte* was filed more than two months after the close of the pleading cycle.

vendors such as Ericsson, Lucent, Nokia, Motorola, and Qualcomm have publicly announced, in both press releases and filings with various standards bodies, development of handset-based location systems. And as the comments already in the record reveal, handset-based Automatic Location Information ("ALI") approaches offer a degree of accuracy, cost efficiency and reliability that will markedly improve the ability of PSAPs and other public safety organizations to save lives in emergencies—which should of course be the overriding factor in any Commission decision on ALI compliance standards.

Nonetheless, with shrill rhetoric but little factual support, TruePosition claims that the Wireless Telecommunications Bureau's ongoing proceeding on handset-based ALI systems for wireless E911 services would "change the rules of the game to extend deadlines or modify rules so that potential competitors who have failed over the last five years to produce workable ALI solutions can continue to experiment at the expense of public safety." TruePosition Ex Parte at 1. That is simply incorrect. The fact is that TruePosition is resorting to *ad hominem* attacks in order to conceal its own technological and commercial failures. As SnapTrack demonstrated convincingly in its May 5, 1999 review of the record compiled in this proceeding—a body of evidence ignored by TruePosition—network-based ALI approaches "are incomplete and extremely costly, and the record corroborates the concerns raised in [recent press reports] as to whether network-based solutions can meet the Phase II deadlines at all."[2]

While TruePosition now contends that the Commission's existing ALI rules are technologically neutral, it never objected to (let alone sought reconsideration of) the Commission's December 1997 finding that the wireless E911 ALI standards would need to be revised, for instance through a "phased-in" implementation schedule, to avoid "hampering" GPS-based technologies that were not considered by the initial cellular/public safety "consensus agreement" in 1994. *Reconsideration Order* ¶ 124. [3] TruePosition's current claims that it is already prepared to meet the Commission's existing E911 standards are unsupported. Within just the last two weeks, for instance, TruePosition's flagship test project, with Houston Cellular Co. and the Greater Harris County E911 Emergency Network, collapsed after Houston Cellular announced that it "will not go forward with an emergency call-locator system *because it is unproven and would put customers at risk.*"[4] (The Houston parties are now in litigation over the matter.) In an explanatory open letter dated May 19, 1999, Houston Cellular reiterated its concerns about these tests and emphasized that network technology is inadequate because "[t]he test currently only locates customers on our analog network while the majority of Houston Cellular's customers are using digital technology; again leaving us unable to locate the vast majority of emergency calls."[5] This prominent failure certainly implies that, despite its claims to the contrary,

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[2] Memorandum from SnapTrack, Inc. to Thomas J. Sugrue, Chief, WTB (May 5, 1999).

[3] *Revision to the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems,* Memorandum Opinion and Order on Reconsideration, CC Docket No. 94-102, 12 FCC Rcd. 2265 (1997)("Reconsideration Order").

[4] "Cellular Firm Won't Pursue Locator System for 911 Calls," Houston Chronicle, May 18, 1999 (attached as Exhibit A)(emphasis supplied).

[5] Open Letter from Houston Cellular at 1 (May 19, 1999) (attached as Exhibit B).

TruePosition is unable to meet the demands of the public safety community and wireless carriers searching for viable, cost-effective ALI solutions.

While we deplore the diversion involved, SnapTrack is compelled to correct the record regarding some of the more egregious misrepresentations and inaccuracies of the TruePosition filing. The facts demonstrate that TruePosition is not "ready to compete with other E911 technologies on an equal playing field," but rather is advancing a self-serving agenda in an effort to solidify the inadvertent Commission-sanctioned monopoly granted network-based technologies for implementation of Phase II E911.

For their part, SnapTrack and other handset-based proponents are merely seeking a fair, marketplace determination on the real-word viability of their ALI technologies. If the equipment and services made available by SnapTrack or any other handset proponent fail to perform (as TruePosition predicts), either economically or technically, carriers will not deploy these systems, end users will therefore not be harmed, and public safety will not be compromised. Receipt of any waiver by a carrier will not serve as a *prima facie* substitute for such carrier's Phase II obligations. If a location technology does not allow for the waiver conditions to be met, a carrier's obligations are not eliminated simply by application for and receipt of a waiver. Consequently, much of what follows is, of necessity, tangential to the real policy issues raised in this proceeding, because TruePosition's *ex parte* comments ignore the commercial reality that the marketplace will weed out those ALI technologies that cannot provide the public safety, cost and performance features required by carriers and PSAPs.

1. The "Flash-Cut" Implementation Standard In the Current E911 Rules Precludes Any Handset-Based ALI Technology

SnapTrack does not, as TruePosition asserts, seek an adjustment of the Commission's rules because "no workable handset-based solution exists." TruePosition Ex Parte at 1. As discussed in Section 2 below, workable handset solutions exist now; it is viable network solutions that do not exist, whether for digital (TDMA, etc.) technologies or, as in Houston, analog cellular (AMPS). Rather, the need for adjustment of the E911 ALI rules has long been recognized by the Commission and the Bureau. This need arises from the fact that the existing 125-meter RMS/October 2001 implementation standard assumes a "flash cut" turn-up of wireless ALI capabilities that, by definition, is incompatible with a handset-based approach to wireless E911.

There is no legitimate dispute on this point.[6] Specifically addressing GPS-based handset alternatives, the *Reconsideration Order* stated that the Commission has "not endorsed or mandated any particular ALI technology or approach," and did not "intend that the implementation deadline, the accuracy standard or other rules" would "unreasonably hamper the development of the best and most efficient ALI systems." *Reconsideration Order* ¶ 124. In October 1998, former Bureau Chief Dan Phythyon explained that the *Reconsideration Order* was intended:

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[6] *Accord, e.g.,* AirTouch Reply Comments at 3 & n.5; Aerial Petition at 2-3; Brazos Cellular Petition at 2; Sprint Petition at 3.

> to specifically address concerns that aspects of the Commission's rules might appear to preclude a handset-based approach. For example, Section 20.18(e) of the Commission's Rules, 47 C.F.R. § 20.18(e), requires that carriers provide ALI for *all* calls, which might not be feasible under a handset-based approach for handsets currently in use.[7]

The Bureau emphasized that it would "continue to take reasonable steps to modify these rules [to support] the best and most efficient ALI technologies and systems, *including handset-based technologies and systems.*" *Id.* at 3 (emphasis supplied). Finally, the Public Notice further explains that:

> A primary concern with applying these rules to handset-based technologies is that carriers may only be able to provide Phase II ALI for new handsets or handsets that have been upgraded to support the chosen technology. . . . It may not be possible or economically feasible for carriers to provide ALI for the embedded base of handsets that have not been upgraded on the date set by the current Commission rules. . . . [Therefore,] the Commission expressed its willingness to consider proposals to phase in implementation, especially to the extent a proposal helps achieve further improvements in ALI capabilities. This could mean, for example, a higher level of accuracy [or] applying the Phase II requirements only to new wireless phones.

Public Notice at 2-3.

Despite TruePosition's argument that the Commission has "emphatically reaffirmed that its current E911 rules *are* technology neutral because they reflect 'general performance criteria, rather than extensive technical standards,'" TruePosition Ex Parte at 2, the Bureau and the Commission have instead repeatedly gone out of their way to point out that because the current rules presume the ability to locate every wireless call to Phase II standards, this "flash-cut" schedule is inconsistent with the marketplace dynamics of handset penetration and turnover. And although TruePosition is correct that there is no legal monopoly for network-based ALI technologies, the fact is that the current rule was drafted with the "expect[ation] that ALI would be implemented by upgrading wireless carriers' networks," which theoretically "would allow the carriers to provide ALI for all handsets." Public Notice at 2.

As a result, there is only one type of ALI technology, namely that based in the network, that can as a practical matter even hypothetically comply with the existing 125 RMS standard by October 2001, because the rule requires 67% of all calls to be located by a date certain. As current Bureau Chief Thomas Sugrue testified to the House in February, the Commission intends to work to ensure technology neutral rules that "allow for all ALI technologies, whether they are

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[7] Letter from Daniel B. Phythyon, Chief, WTB, to Pamela J. Riley, AirTouch (Oct. 23, 1998)(attached as Exhibit C) (emphasis in original).

located in the carriers' networks or in handsets."[8] More pointedly, as Mr. Sugrue replied to Rep. Gordon during questioning at the hearing, *"[i]f our rules were applied literally, no one, no carrier, no system using a handset-based approach could satisfy our requirements.* Not because we wanted to rule it out, because we wrote the rules in a way without that in mind."[9] It is this problem, inadvertent but nonetheless a complete barrier that can be overcome by "no one" adopting a handset-based approach to ALI, that the Bureau is addressing in the current Public Notice proceeding.

2. GPS-Based Handset Solutions Do Not Suffer Any Significant "Shortcomings" And are Vastly Superior To Comparatively Costly, Inaccurate and Limited Network Alternatives

TruePosition's contention that handset-based ALI providers "offer nothing but speculation that handset-based ALI technologies will be available in the near future," TruePosition Ex Parte at 1, is likewise incorrect. SnapTrack has and continues to offer a substantial and growing body of audited test results that demonstrate that handset-based technologies work in all potential environments (urban, rural, indoors, etc.) and with all wireless modulation schemes, and provide a significant degree of accuracy to wireless E911 location. In contrast, it is the viability of network-based technologies that have been called in to question by the record in this proceeding. As just one example, AT&T Wireless has advised the Commission that there is no currently available network-based ALI technology for use with its TDMA systems, and none is expected prior to the existing 2001 compliance deadline.[10]

TruePosition's most glaring falsehood is thus the assumption, which pervades its *ex parte* comments, that there are "working network solutions" available today, while handset-based solutions are based upon what it terms "exaggerated deployment schedules." TruePosition Ex Parte at 2, 12. Yet network technologies have not even been developed (let alone tested) for CDMA or GSM systems, AT&T Comments at 2-3, cannot work (while handset solutions can) in harsh "multipath" environments like urban downtown locations, US West Reply Comments at 4, and cannot operate (while handset solutions excel) in rural environments where there are insufficient cell sites to permit triangulation, US West Reply Comments at 5; Inland Cellular

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[8] Statement of Thomas J. Sugrue to the Subcommittee on Telecommunications, Trade and Consumer Protection, at 3 (Feb. 3, 1999)(emphasis supplied).

[9] The relevant excerpts from the transcript of the February 3, 1999 House Telecommunications Subcommittee hearings, including the complete exchange between Rep. Gordon and Bureau Chief Sugrue, are attached as Exhibit D.

[10] There simply is no network-based ALI solution for TDMA that is procurement-ready today. AT&T Wireless Comments at 3-5. Sprint Spectrum Waiver at 3; Wireless Services Comments at 2-3. Despite the claims of certain network-based technology vendors that their solutions will work for wireless networks using TDMA, these solutions are still in the testing phase. AT&T Reply Comments at 4. Compare TruePosition Response at 5 with Attachment 3, Press Release, "TruePosition Releases TDMA Modules for Wireless Location System," released Feb. 1, 1999 (announcing that TruePosition has "*commenced production*" of AMPS/TDMA modules for the series 2 TruePosition Wireless Location System" and has "successfully completed laboratory testing and *begun field trials*." (emphasis added)). AT&T notes that it will have to conduct its own integration tests to ensure that any potential solution will not negatively impact digital performance. It notes that it hopes the TruePosition solution is available within a year, but that "this outcome is far from certain." AT&T Wireless Reply Comments at 4.

Telephone Reply Comments at 3. And even if its technology were workable, TruePosition ignores the reality that network-based solutions are so costly that for many wireless carriers "it will be simply impossible to generate sufficient revenue, either from customers or from direct subsidies from the state's 911 fund, to cover the cost of the equipment over a remotely reasonable timeframe." North Alabama Cellular Petition at 1.

This *ex parte* is not the only example of exaggeration and hiding of relevant facts by TruePosition. It claimed in its February 1999 comments, incorrectly according to the very carriers who are looking for ALI solutions, that its "ALI technology is capable of determining the location for all existing types of analog and digital CMRS networks (GSM, TDMA, CDMA, ESMR) well within Phase II requirements." TruePosition Comments at 4. It then stated that "[i]n fact, TruePosition has commercially installed its system in Houston." *Id.* at 5 (citing TruePosition Press Release).[11] That was also a blatant exaggeration. As Houston Cellular President Donald Kovalevich wrote to TruePosition's President Kent Sander on March 1, 1999:

> It has been brought to my attention that representatives of TruePosition have made claims that the E-911 trial was in a commercial state. We both know this is inaccurate information based on the fact that we are in a testing phase, and the contract agreement with Greater Harris County is for a trial only. . . *The trial is for testing and is not a commercial application at this time.* Any public announcement or statement otherwise is inaccurate and misleading.[12]

The suggestion that the "phased-in implementation that waiver proponents seek," TruePosition Ex Parte at 4, was "designed to placate" shortcomings of SnapTrack's technology is absurd. A phased-in approach was first proposed by the Commission in its December 1997 *Reconsideration Order.* By requiring the introduction of ALI-capable handsets prior to October 1, 2001, the proposed waivers would *accelerate* the delivery of E911 protection to consumers rather than "indefinitely prolong" such delivery as TruePosition suggests. TruePosition Ex Parte at 2. Moreover, SnapTrack has submitted extensive test data demonstrating its ability to meet and substantially exceed a 90-meter ALI accuracy standard.[13] Recognizing this greater accuracy, the Chief of the Wireless Bureau testified to the House that "one of the things we might do is say you get the waiver if you commit to high accuracy levels."[14]

Only hyperbole supports TruePosition's insistence that "the Bureau cannot blindly accept the unsubstantiated predictions and aspirations of those touting unproven technologies." TruePosition Ex Parte at 6. SnapTrack has substantiated and extensively tested its handset ALI

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[11] TruePosition similarly claimed that "network-based location system is commercially deployed and fully operational . . . in Greater Harris County." TruePosition Comments at 17.

[12] Letter from Donald Kovalevich, President, Houston Cellular Co., to Kent Sander, President,. TruePosition, Inc. at 1 (March 1, 1999)(attached as Exhibit E)(emphasis supplied). *See* "Phase II Not Ready—Carriers May Pull Out of E911 Test," Wireless Week, April 26, 1999 ("One source close to the trial indicated technical problems are the reason [why] Houston Cellular sent a letter to TruePosition, Inc. warning the vendor not to call the Phase II system it installed . . . a commercial product.").

[13] SnapTrack Comments at Exh. A.

[14] *See* Exhibit D.

technology and has presented the results of these tests to the Commission in this docket.[15] SnapTrack did not ignore the claimed technical criticisms in TruePosition's February 16 comments. *Id.* at 6. For instance, TruePosition challenges whether standards are, in fact, being developed to support ALI capabilities for roamers. SnapTrack's comments addressed this point (SnapTrack Comments at 11 and note 15), and more recently, in a presentation given by the Chair of TR45.5 (CDMA Air Interface) on May 5, 1999, it is clear that standards are in fact rapidly being developed.[16] Finally, TruePosition's comments urge that "to assume 100 million users will trade in their phones . . . is probably wishful thinking."[17] SnapTrack's handset penetration assumptions are supported by ample record evidence on the accelerating rate of handset replacement.[18] As confirmed in a recent Associated Press story, "[p]eople buy a new cell phone every two to three years, a FCC attorney said."

TruePosition contends erroneously that SnapTrack has "no working prototype." True-Position Ex Parte at 6. Yet the results from the Tampa trial, which SnapTrack has included as Exhibit G to this submission, dispel this obsolete claim. As Sprint and GTE reported after the Tampa trials to the CDMA Development Group, their final conclusion was "NO BAD NEWS."[19] There, single unit GPS-integrated handsets from multiple manufacturers were not only tested but publicly demonstrated to industry and public safety representatives. Thus, although that was not the case in last year's August 1998 Denver trials, the March 1999 trial used working, *integrated* handsets.[20] (The picture in TruePosition's Exhibit 1 is not of any of the handsets used in Tampa, but rather an early test set used more than a year ago that was part of a preliminary SnapTrack report filed with Committee T1P1 in August 1998.) Finally, multiple miniature GPS antennae capable of integration into wireless handsets were tested in Tampa; however, some antennae were not fully integrated so they could be easily swapped in order to more efficiently test more than one antenna with a single handset. In order to accurately communicate to the media and the public what the testing involved, that information was posted to the website. TruePosition Ex Parte at Exh. 2.

As the results of the Tampa trial indicate, integration of internal antennae does not "lead to significant performance degradation." TruePosition Ex Parte at 7 & note 12. First, the 20 dB loss shown in the diagram referenced at note 12 of TruePosition's *ex parte* was generated in laboratory testing not representative of real world conditions, and thus is not directly relevant to the performance of any operational GPS system.[21] Second, the first phase of Tampa testing in March 1999 demonstrated the real-world performance capabilities of antenna integration. Finally, a prototype of the integrated GPS phone (with an internal patch antenna) used in testing

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[15] SnapTrack Comments at Exh. A.

[16] Specifically, text for a "point-to-point" baseline was developed for the May TR45.5 opening plenary on May 17, 1999. Similarly, text was developed for V & V (Validation and Verification) baseline during May meeting and a ballot text was presented at the conclusion of the May meeting. Clearly, standards are well-underway. *See* Exhibit F.

[17] TruePosition Comments at 18.

[18] SnapTrack May 5, 1999 Ex Parte at 5-6.

[19] Exhibit G at 19.

[20] *See* Exhibit G.

[21] SnapTrack Comments at Exh. A.

was shown to the Wireless Bureau and Chairman Kennard in April 1999. Thus, contrary to TruePosition's claims, "SnapTrack's recent Tampa trials" do "demonstrate significant advances in the company's technology," and the phones tested were "fully GPS-integrated." *See* TruePosition Ex Parte at 7.

TruePosition also misrepresents SnapTrack's ability to work with TDMA, GSM and AMPS systems. TruePosition Ex Parte at 7. SnapTrack has both tested and demonstrated to third parties its technology on AMPS, GSM, PDC (a flavor of TDMA), and CDMA. In fact, NTT DoCoMo, Japan's largest wireless carrier, has licensed SnapTrack's technology for commercial use in its PDC network.

Finally, TruePosition claims that "even with standardization, an IDC system could not locate a SnapTrack-equipped phone." TruePosition Ex Parte at 11. This is flatly incorrect. The whole purpose of standardizing messages for network-assisted GPS is to assure that handsets equipped with SnapTrack technology *can* be located by a CMRS system relying on another handset-based technology. Network equipment and handsets will be transparently interoperable among vendors, since that is the precise function of setting industry wide standards. TruePosition Ex Parte at 11.

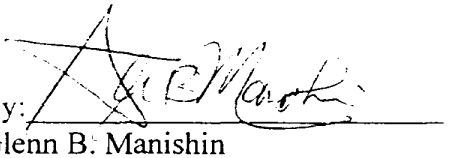
3. TruePosition's Ex Parte Comments Mischaracterize the Issues, the Commission's Rules and the Public Interest in Improved ALI Accuracy

TruePosition repeatedly misstates the Commission's rules. For instance TruePosition comments that "[t]he Commission has twice . . . concluded that the public interest, and specifically public safety requires that by 2001 all CMRS users be located when making emergency calls." TruePosition Ex Parte at 6. The Commission has not mandated "that *all* 911 callers be located." *Id.* at 3, 10. The mandate requires that CMRS carriers be able to provide location *if* requested to do so by the PSAP and *if* a cost-recovery mechanism is in place. Similarly, the Commission has not determined that "consumers do not even have to subscribe to CMRS to have full ALI protection." TruePosition Ex Parte at 10. The Commission only has mandated that non-initialized phones be able to complete an E911 call.

With respect to roamers, SnapTrack does not presume that "network-based solutions will be ubiquitously available" to solve roamer problems. TruePosition Ex Parte at 12. Rather, SnapTrack simply asserts that *if* a network solution is deployed, such a solution will locate handsets roaming in that area where it is deployed to the same extent that it locates any other call. As discussed above, standardization (both within GPS handset-based technologies and across any specific wireless air interface, such as TDMA or CDMA) will minimize the barriers to location of roamers using a handset-based ALI approach. As to TruePosition's implication that SnapTrack is somehow hiding costs for its systems, TruePosition Ex Parte at 7, SnapTrack simply responds that if it is not cost-competitive, it will lose in the marketplace. Carriers and PSAPs, not this Commission, are best situated to make the economic decisions associated with E911 ALI deployment.

Most importantly, accepting TruePosition's rhetorical posturing and mischaracterizations would have the unfortunate result of damaging the public interest by denying wireless users the benefit of the increased competition engendered by handset-based ALI technologies. The Commission should not accept the unsubstantiated claims of one entity that is losing in the competitive marketplace as definitive evidence of the purported non-viability of handset-based ALI technology. Instead, as SnapTrack has demonstrated, and the record supports, handset solutions offer a real, and potentially superior, alternative to network-based solutions. Given recent developments in Houston, it certainly appears that the TruePosition *ex parte* was aimed at deflecting the growing body of third-party evidence suggesting that network-based solutions are in jeopardy of being able to meet the Commission's deadline. If instead of attacking handset-based technologies with which it is clearly unfamiliar, TruePosition focused on its own technical development and long-promised "commercial" deployment, it might be more ready to meet competing ALI technologies and serve the important public safety and public interest objectives the Commission is striving to achieve in this proceeding.

Respectfully submitted,

By: 

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